

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An electronically controlled pedal assembly with hysteresis comprising:

a housing having a front wall and an arcuate friction wall extending from an edge of said front wall wherein said friction wall has a radius of curvature centered on a pedal arm pivot point;

a pedal arm having an upper arm and a lower arm and is rotatably supported at said pedal arm pivot point that is between said upper pedal arm and said lower pedal arm by a mounting means operatively connected to said housing;

a hysteresis generating means pivotally ~~connected~~ attached to said upper pedal arm by a pivot pin; and

a spring positioned between said housing and said hysteresis generating means, wherein said spring biases said hysteresis generating means against said housing, such that depression of said pedal arm compresses said spring while increasing a frictional hysteresis force between said arcuate friction wall and said hysteresis generating means that is translated back through said pedal arm, and release of said pedal arm reduces the frictional hysteresis force.

2. (Currently Amended) The pedal assembly of claim 1 wherein said hysteresis generating means is a friction lever pivotally connected to an outer end of said upper pedal arm by said pivot pin at a friction lever pivot point.

3. (Currently Amended) An electronically controlled pedal assembly with hysteresis comprising:

a housing having a front wall and an arcuate friction wall extending from an edge of said front wall wherein said friction wall has a radius of curvature centered on a pedal arm pivot point;

a pedal arm having an upper arm and a lower arm and is rotatably supported at said pedal arm pivot point that is between said upper pedal arm and said lower pedal arm by a mounting means operatively connected to said housing;

a hysteresis generating means pivotally ~~connected~~ attached to said upper pedal arm having a friction lever pivotally ~~connected~~ attached to an outer end of said upper pedal arm by a pivot pin at a friction lever pivot point, wherein said friction lever includes an integrally formed main member, a lower member extending radially from a lower end of said main member and an upper arcuate member extending radially from an upper end of said main member, and an upper surface of said upper arcuate member is abraded to frictionally engage a surface of said housing arcuate friction wall; and

a spring positioned between said housing and said hysteresis generating means, wherein said spring biases said hysteresis generating means against said housing, such that depression of said pedal arm compresses said spring while generating an increasing frictional hysteresis force between said arcuate friction wall and said hysteresis generating means that is translated back through said pedal arm, and release of said pedal arm reduces the frictional hysteresis force.

4. (Previously Presented) The pedal assembly of claim 3 wherein said friction lever upper arcuate member is canted toward said housing arcuate friction wall to increase the frictional hysteresis force when said pedal arm is depressed and reduce the frictional hysteresis force when said pedal arm is released.

5. (Previously Presented) The pedal assembly of claim 2 wherein said friction lever includes an integrally formed main member and an upper arcuate member extending forwardly from an upper end of said main member, and an upper surface of said friction lever upper arcuate member is abraded to frictionally engage said housing arcuate friction wall.

6. (Currently Amended) The pedal assembly of claim 1 wherein said hysteresis generating means includes:

a friction lever pivotally connected to said upper pedal arm by a pivot pin at a friction lever pivot point;

a push arm pivotally mounted to said pedal arm at a push arm pivot point that is radially inward from said friction lever pivot point, wherein said push arm is in contact with said friction lever, such that said spring forces said push arm against said friction lever to increase the frictional hysteresis force.

7. (Previously Presented) The pedal assembly of claim 1 wherein said pedal arm includes a disk portion, and said lower pedal arm extends from a lower edge of said disk portion and said upper pedal arm extends from an upper edge of said disk portion.

8. (Original) The pedal assembly of claim 1 wherein said mounting means is a post and bushing.

9. (Currently Amended) The pedal assembly of claim 1 ~~wherein said hysteresis generating means includes~~ further comprising:

[[a]] said friction wall extending radially from said housing front wall, wherein said friction wall includes an arcuate frictional surface, and is positioned between ~~said housing~~ a rear wall of said housing and said pedal arm; and

a friction lever having a first portion pivotally mounted to said pedal arm and a second portion in frictional contact with said friction wall to increase the frictional hysteresis force during actuation of said pedal arm.

10. (Previously Presented) The pedal assembly of claim 1 further comprising:

a cap mounted to said housing;

an alignment post extending radially from a face portion of said cap, wherein said alignment post aligns said cap with said pedal arm pivot point;

a plurality of mounting posts extending radially from said cap face portion; and

an induction sensor for sensing the position of said pedal arm operatively mounted on said cap alignment post and said cap mounting posts, wherein said induction sensor includes a first rotor and a second rotor and a stator suspended between said first and second rotors.

11. (Original) The pedal assembly of claim 10 wherein said cap alignment post is operatively supported on said pedal arm mounting means.

12. (Original) The pedal assembly of claim 11 wherein said cap includes at least one slot for securing the cap assembly to said housing in a predetermined position.

13. (Currently Amended) ~~The~~ An electronically controlled pedal assembly of claim 12 with hysteresis comprising:

a housing having a front wall and an arcuate friction wall extending from an edge of said front wall wherein said friction wall has a radius of curvature centered on a pedal arm pivot point;

a pedal arm having an upper arm and a lower arm and is rotatably supported at said pedal arm pivot point that is between said upper pedal arm and said lower pedal arm by a mounting means operatively connected to said housing;

a hysteresis generating means pivotally attached to said upper pedal arm by a pivot pin;

a spring positioned between said housing and said hysteresis generating means, wherein said spring biases said hysteresis generating means against said housing, such that depression of said pedal arm compresses said spring while increasing a frictional hysteresis force between said arcuate friction wall and said hysteresis generating means that is translated back through said pedal arm, and release of said pedal arm reduces the frictional hysteresis force;

a cap mounted to said housing wherein said cap includes at least one slot for securing the cap assembly to said housing in a predetermined position;

an alignment post extending radially from a face portion of said cap, wherein said cap alignment post is operatively supported on said pedal arm mounting means and aligns said cap with said pedal arm pivot point;

a plurality of mounting posts extending radially from said cap face portion; and

an induction sensor for sensing the position of said pedal arm operatively mounted on said cap alignment post and said cap mounting posts, wherein said induction sensor includes a

first rotor and a second rotor and a stator suspended between said first and second rotors,
wherein said first rotor includes a generally planar member with conductive plates positioned above a radially extending center post, and said second rotor is a generally planar member with conductive plates positioned thereon relative to said first rotor conductive plates and a center mounting aperture, and said stator is mounted onto a generally planar circuit board supported by said cap mounting posts.

14. (Currently Amended) An electronically controlled pedal assembly with hysteresis comprising:

a housing having a front wall and an arcuate friction wall extending from an edge of said front wall wherein said friction wall has a radius of curvature centered on a pedal arm pivot point;

a pedal arm rotatably supported at said pedal arm pivot point by a mounting means operatively connected to said housing, wherein said pedal arm includes a disk portion, a lower pedal arm extending from a lower edge of said disk portion and an upper arm extending from an upper edge of said disk portion and said pedal arm pivot point is between said upper pedal arm and said lower pedal arm;

a hysteresis generating means pivotally mounted to said upper pedal arm for pivotal movement relative to said upper pedal arm, wherein said hysteresis generating means is a friction lever pivotally ~~connected~~ secured to an outer end of said upper pedal arm by a pivot pin at a friction lever pivot point; and

a spring positioned between said housing and said hysteresis generating means, wherein said spring biases said hysteresis generating means against said housing, such that depression of

said pedal arm compresses said spring while increasing a frictional hysteresis force between said arcuate friction wall and said hysteresis generating means that is translated back through said pedal arm, and release of said pedal arm reduces the frictional hysteresis force.

15. (Currently Amended) An electronically controlled pedal assembly with hysteresis comprising:

a housing having a front wall and an arcuate friction wall extending from an edge of said front wall wherein said friction wall has a radius of curvature centered on a pedal arm pivot point;

a pedal arm rotatably supported at said pedal arm pivot point by a mounting means operatively connected to said housing, wherein said pedal arm includes a disk portion, a lower pedal arm extending from a lower edge of said disk portion and an upper arm extending from an upper edge of said disk portion and said pedal arm pivot point is between said upper pedal arm and said lower pedal arm;

a hysteresis generating means pivotally mounted to said upper pedal arm for pivotal movement relative to said upper pedal arm having a friction lever pivotally connected to an outer end of said upper pedal arm by a pivot pin at a friction lever pivot point, wherein said friction lever includes an integrally formed main member, a lower member extending radially from a lower end of said main member and an upper arcuate member extending radially from an upper end of said main member, and an upper surface of said upper arcuate member is abraded to frictionally engage a surface of said housing arcuate friction wall; and

a spring positioned between said housing and said hysteresis generating means, wherein said spring biases said hysteresis generating means against said housing, such that depression of

said pedal arm compresses said spring while increasing a frictional hysteresis force between said arcuate friction wall and said hysteresis generating means that is translated back through said pedal arm, and release of said pedal arm reduces the frictional hysteresis force.

16. (Previously Presented) The pedal assembly of claim 15 wherein said friction lever upper arcuate member is canted toward said housing arcuate friction wall to increase the frictional hysteresis force when said pedal arm is depressed and reduce the frictional hysteresis force when said pedal arm is released.

17. (Previously Presented) The pedal assembly of claim 14 wherein said friction lever includes an integrally formed main member and an upper arcuate member extending forwardly from an upper end of said main member, and an upper surface of said friction lever upper arcuate member is abraded to frictionally engage said housing arcuate friction wall.

18. (Previously Presented) The pedal assembly of claim 14 further comprising a push arm pivotally mounted to said pedal arm at a push arm pivot point that is radially inward from said friction lever pivot point, wherein said push arm is in contact with said friction lever, such that said spring forces said push arm against said friction lever to increase the frictional hysteresis force.

19. (Currently Amended) The pedal assembly as set forth in claim 14 ~~wherein said hysteresis generating means includes~~ further comprising:

[[a]] said friction wall extending radially from said housing front wall, wherein said friction wall includes an arcuate frictional surface, and is positioned between ~~said housing~~ a rear wall of said housing and said pedal arm; and

a friction lever having a first portion pivotally mounted to said pedal arm and a second portion in frictional contact with said friction wall to increase the frictional hysteresis force during actuation of said pedal arm.

20. (Withdrawn) An electronically controlled pedal assembly with hysteresis comprising:

a mounting bracket;

a pedal arm;

a pedal support arm extending between said bracket and said pedal arm, wherein said pedal arm is pivotally mounted to said pedal support arm at a pedal arm pivot point using a pedal arm mounting means and said pedal support arm is pivotally mounted to said mounting bracket at a pedal support arm pivot point using a support arm mounting means;

a hysteresis generating means operatively supported on said support arm mounting means at said pedal support arm pivot point, wherein said hysteresis device includes a torsion spring having two arms with one arm having a hook end, and a friction spacer having a cylindrical portion and an outer helical flange, wherein said friction spacer is disposed within the torsion spring such that the outer flange of said friction spacer fits between said coils of said coil spring, such that rotation of said support arm creates a frictional hysteresis force between said torsion spring and said friction spacer that is translated back through said pedal arm.

21. (Withdrawn) The pedal assembly of claim 20 wherein said friction spacer includes a longitudinally extending slit.

22. (Withdrawn) The pedal assembly of claim 21 wherein said mounting means is a pivot pin.

23. (Currently Amended) An electronically controlled pedal assembly with hysteresis comprising:

a housing having a front wall and an arcuate friction wall extending from an edge of said front wall, wherein said friction wall has a radius of curvature centered on a pedal arm pivot point;

a pedal arm having an upper arm and a lower arm and is rotatably supported at said pedal arm pivot point that is between said upper pedal arm and said lower pedal arm by a mounting means operatively connected to said housing;

a hysteresis generating means pivotally ~~connected~~ attached to said upper pedal arm by a pivot pin at a friction lever pivot point;

a spring positioned between said housing and said hysteresis generating means, wherein said spring biases said hysteresis generating means against said housing, such that depression of said pedal arm compresses said spring while increasing a frictional hysteresis force between said arcuate friction wall and said hysteresis generating means that is translated back through said pedal arm, and release of said pedal arm reduces the frictional hysteresis force;

a cap connected to said housing having an alignment post extending radially from a face portion of said cap, and said alignment post aligns said cap with said pedal arm pivot point, and said cap has a plurality of mounting posts extending radially from a cap face portion; and

an induction sensor for sensing the position of said pedal arm operatively mounted on said cap alignment post and said cap mounting posts, wherein said induction sensor includes a first rotor and a second rotor and a stator suspended between said first and second rotors.

24. (Currently Amended) The pedal assembly of claim 23 wherein said hysteresis generating means is a friction lever pivotally connected to an outer end of said upper pedal arm at ~~[[a]]~~ the friction lever pivot point.

25. (Currently Amended) An electronically controlled pedal assembly with hysteresis comprising:

a housing having a front wall and an arcuate friction wall extending from an edge of said front wall, wherein said friction wall has a radius of curvature centered on a pedal arm pivot point;

a pedal arm having an upper arm and a lower arm and is rotatably supported at said pedal arm pivot point that is between said upper pedal arm and said lower pedal arm by a mounting means operatively connected to said housing;

a hysteresis generating means pivotally ~~connected~~ attached to said upper pedal arm having a friction lever pivotally ~~connected~~ attached to an outer end of said upper pedal arm by a pivot pin at a friction lever pivot point, wherein said friction lever includes an integrally formed main member, a lower member extending radially from a lower end of said main member and an

upper arcuate member extending radially from an upper end of said main member, and an upper surface of said upper arcuate member is abraded to frictionally engage a surface of said housing arcuate friction wall;

a spring positioned between said housing and said hysteresis generating means, wherein said spring biases said hysteresis generating means against said housing, such that depression of said pedal arm compresses said spring while increasing a frictional hysteresis force between said arcuate friction wall and said hysteresis generating means that is translated back through said pedal arm, and release of said pedal arm reduces the frictional hysteresis force;

a cap connected to said housing having an alignment post extending radially from a face portion of said cap, and said alignment post aligns said cap with said pedal arm pivot point, and said cap has a plurality of mounting posts extending radially from a cap face portion; and

an induction sensor for sensing the position of said pedal arm operatively mounted on said cap alignment post and said cap mounting posts, wherein said induction sensor includes a first rotor and a second rotor and a stator suspended between said first and second rotors.

26. (Previously Presented) The pedal assembly of claim 25 wherein said friction lever upper arcuate member is canted toward said housing arcuate friction wall to increase the frictional hysteresis force when said pedal arm is depressed and reduce the frictional hysteresis force when said pedal arm is released.

27. (Previously Presented) The pedal assembly of claim 24 wherein said friction lever includes an integrally formed main member and an upper arcuate member extending

forwardly from an upper end of said main member, and an upper surface of said friction lever upper arcuate member is abraded to frictionally engage said housing arcuate friction wall.

28. (Currently Amended) The pedal assembly of claim 23 wherein said hysteresis generating means includes:

a friction lever pivotally ~~connected~~ attached to said upper pedal arm by a pivot pin at a friction lever pivot point;

a push arm pivotally mounted to said pedal arm at a push arm pivot point that is radially inward from said friction lever pivot point, wherein said push arm is in contact with said friction lever, such that said spring forces said push arm against said friction lever to increase the frictional hysteresis force.

29. (Original) The pedal assembly of claim 23 wherein said mounting means is a post and bushing.

30. (Currently Amended) The pedal assembly of claim 23 ~~wherein said hysteresis generating means includes~~ further comprising:

[[a]] said friction wall extending radially from said housing front wall, wherein said friction wall includes an arcuate frictional surface, and is positioned between ~~said housing~~ a rear wall of said housing and said pedal arm; and

a friction lever having a first portion pivotally mounted to said pedal arm and a second portion in frictional contact with said friction wall to increase the frictional hysteresis force during actuation of said pedal arm.

31. (Original) The pedal assembly of claim 23 wherein said cap alignment post is operatively supported on said pedal arm mounting means.

32. (Original) The pedal assembly of claim 31 wherein said cap includes at least one slot for securing the cap assembly to said housing in a predetermined position.

33. (Currently Amended) ~~The~~ An electronically controlled pedal assembly ~~of claim 32~~ with hysteresis comprising:

a housing having a front wall and an arcuate friction wall extending from an edge of said front wall, wherein said friction wall has a radius of curvature centered on a pedal arm pivot point;

a pedal arm having an upper arm and a lower arm and is rotatably supported at said pedal arm pivot point that is between said upper pedal arm and said lower pedal arm by a mounting means operatively connected to said housing;

a hysteresis generating means pivotally attached to said upper pedal arm by a pivot pin at a friction lever pivot point;

a spring positioned between said housing and said hysteresis generating means, wherein said spring biases said hysteresis generating means against said housing, such that depression of said pedal arm compresses said spring while increasing a frictional hysteresis force between said arcuate friction wall and said hysteresis generating means that is translated back through said pedal arm, and release of said pedal arm reduces the frictional hysteresis force;

a cap connected to said housing wherein said cap includes at least one slot for securing the cap assembly to said housing in a predetermined position;

an alignment post extending radially from a face portion of said cap, wherein said cap alignment post is operatively supported on said pedal arm mounting means that aligns said cap with said pedal arm pivot point;

a plurality of mounting posts extending radially from a cap face portion;

an induction sensor for sensing the position of said pedal arm operatively mounted on said cap alignment post and said cap mounting posts, wherein said induction sensor includes a first rotor and a second rotor and a stator suspended between said first and second rotors, wherein said first rotor includes a generally planar member with conductive plates positioned above a radially extending center post, and said second rotor is a generally planar member with conductive plates positioned thereon relative to said first rotor conductive plates and a center mounting aperture, and said stator is mounted onto a generally planar circuit board supported by said cap mounting posts.